

<221> VARIANT

```
SEQUENCE LISTING
 <110> Desjarlais, John R.
. <120> APPARATUS AND METHOD FOR DESIGNING
       PROTEINS AND PROTEIN LIBRARIES
<130> 16380-002001
 <140> US 09/877,695
 <141> 2001-06-08
 <150> US 60/266,711
 <151> 2001-02-06
 <160> 4
 <170> FastSEQ for Windows Version 4.0
 <210> 1
 <211> 34
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> exemplary motif
 <400> 1
 Ser Leu Pro Ser Gly Trp Thr Gln Leu Thr Lys Ala Ser Asp Asp Thr
                                      10
 Thr Tyr Tyr Tyr Asn Lys Thr Thr Asp Val Val Thr Asn Thr Arg Pro
 Thr Asp
 <210> 2
 <211> 34
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> exemplary motif
 <221> VARIANT
 <222> 1
 <223> Xaa = Ser, Asn, or Asp
 <221> VARIANT
 <223> Xaa = Gln, Lys, Pro, Val, Glu, or Arg
 <221> VARIANT
 <222> 10-
 <223> Xaa = Thr or Lys
```

```
<222> 12
 <223> Xaa = Ala or Ser
<221> VARIANT
 <222> 13
. <223> Xaa = Ser or Gly
 <221> VARIANT
·<222> 15
 <223> Xaa = Asp, Asn, Glu, or Ser
 <221> VARIANT
 <222> 22
 <223> Xaa = Lys or Gln
 <221> VARIANT
 <222> 24
 <223> Xaa = Thr or Ser
 <221> VARIANT
 <222> 25
 <223> Xaa = Asp or Asn
 <221> VARIANT
 <222> 27
 \langle 223 \rangle Xaa = Val or Lys
 <221> VARIANT
 <222> 31
 <223> Xaa = Arg, Asn, or Gln
 <221> VARIANT
 <222> 34
 <223> Xaa = Asp or Asn
 <400> 2
 Xaa Leu Pro Ser Gly Trp Thr Xaa Leu Xaa Lys Xaa Xaa Asp Xaa Thr
                                      10
 Thr Tyr Tyr Asn Xaa Thr Xaa Xaa Val Xaa Thr Asn Thr Xaa Pro
                                  25
 Thr Xaa
 <210> 3
 <211> 34
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> exemplary motif
 <221> VARIANT
 <222> 1
 <223>-Xaa = Ser, Asn, Asp, or Glu
 <221> VARIANT
 <222> 8
```

```
<223> Xaa = Gln, Lys, Pro, Val, Glu, Arg, or Asn
  <221> VARIANT
  <222> 9
  <223> Xaa = Leu or Gln
< <221> VARIANT
  <222> 10
 < <223> Xaa = Thr or Lys
  <221> VARIANT
   <222> 12
  <223> Xaa = Ala or Ser
  <221> VARIANT
   <222> 13
  <223> Xaa = Ser or Gly
  <221> VARIANT
  <222> 14, 25, 29, 34
  <223> Xaa = Asp or Asn
  <221> VARIANT
  <222> 15
  <223> Xaa = Asp, Asn, Glu, or Ser
  <221> VARIANT
  <222> 16
  <223> Xaa = Thr or Ser
  <221> VARIANT
  <222> 17
  <223> Xaa = Thr or Val
  <221> VARIANT
  <222> 19
  <223> Xaa = Tyr or Phe
  <221> VARIANT
  <222> 22
  <223> Xaa = Lys, Gln, or Glu
  <221> VARIANT
  <222> 24
  <223> Xaa = Thr or Ser
  <221> VARIANT
  <222> 26
  <223> Xaa = Val, Thr, or Gln
  <221> VARIANT
  <222> 27
```

<223> Xaa = Val, Lys, or Thr

<221> VARIANT

<222> 28

 $[\]langle 223 \rangle$ Xaa = Thr or Gln

```
<221> VARIANT
  <222> 31
 \langle 223 \rangle Xaa = Arg, Asn, or Gln
 . <400> 3
· Xaa Leu Pro Ser Gly Trp Thr Xaa Xaa Xaa Lys Xaa Xaa Xaa Xaa
   1
                                       10
 * Xaa Tyr Xaa Tyr Asn Xaa Thr Xaa Xaa Xaa Xaa Xaa Xaa Thr Xaa Pro
   Thr Xaa
   <210> 4
   <211> 34
   <212> PRT
   <213> Artificial Sequence
  <223> exemplary motif
  <221> VARIANT
   <222> 1
   <223> Xaa = Ser, Asn, or Asp
  <221> VARIANT
   <222> 8
   <223> Xaa = Gln or Lys
  <221> VARIANT
   <222> 10
  <223> Xaa = Thr or Lys
  <221> VARIANT
  <222> 12
   <223> Xaa = Ala or Ser
  <221> VARIANT
  <222> 13
  <223> Xaa = Ser or Gly
  <221> VARIANT
  <222> (14)...(15)
  <223> Xaa = Asp or Asn
  <221> VARIANT
  <222> 17
  <223> Xaa = Thr or Val
  <221> VARIANT
   <222> 19
  <223> Xaa = Tyr or Phe
  <221> VARIANT
  <222> 22
```

<223> Xaa = Lys or Gln

```
<221> VARIANT
```

<222> 24

<223> Xaa = Thr or Ser

<221> VARIANT

<222> 25

<223> Xaa = Asp or Asn

- <221> VARIANT

<222> 27

<223> Xaa = Val or Lys

<221> VARIANT

<222> 28

<223> Xaa = Thr or Gln

<221> VARIANT

<222> 31

<223> Xaa = Arg or Asn

<221> VARIANT

<222> 34

<223> Xaa = Asp or Asn

<400> 4

Xaa Leu Pro Ser Gly Trp Thr Xaa Leu Xaa Lys Xaa Xaa Xaa Xaa Thr 1 5 10 15

Xaa Tyr Xaa Tyr Asn Xaa Thr Xaa Xaa Val Xaa Xaa Asn Thr Xaa Pro 20 25 30

Thr Xaa